Quick Start Guide
00825-0100-4801, Rev MA
May 2015

Rosemount 3051S Series Pressure Transmitter and Rosemount 3051SF Series Flowmeter

with HART® Protocol

ROSEMOUNT

EMERSON.
Process Management

NOTICE

This guide provides basic guidelines for Rosemount 3051S Transmitters (reference manual document number 00809-0100-4801). It also provides the basic electronic guidelines for the 3051SFA (reference manual document number 00809-0100-4809), 3051SFC (reference manual document number 00809-0100-4810), and 3051SFP (reference manual document number 00809-0100-4686). It does not provide instructions for diagnostics, maintenance, service, or troubleshooting. This document is also available electronically on www.rosemount.com.

WARNING

Explosions could result in death or serious injury.

Installation of this transmitter in an explosive environment must be in accordance with the appropriate local, national, and international standards, codes, and practices. Please review the approvals section of this guide for any restrictions associated with a safe installation.

- Before connecting a Field Communicator in an explosive atmosphere, ensure the instruments in the loop are installed in accordance with intrinsically safe or non-incendive field wiring practices.
- In an Explosion-Proof/Flameproof installation, do not remove the transmitter covers when power is applied to the unit.
- Use appropriately rated Ex adaptors, blanking elements, or glands during installation.
- Keep process insulation at least 1 inch [25 mm] from transmitter connection.

Process leaks may cause harm or result in death.

- Install and tighten process connectors before applying pressure.

Electrical shock can result in death or serious injury.

- Avoid contact with the leads and terminals. High voltage that may be present on leads can cause electrical shock.

Conduit/cable entries

- Unless marked, the conduit/cable entries in the transmitter housing use a $^{1}/_{2}$-14 NPT thread form. Entries marked "M20" are M20 x 1.5 thread form. On devices with multiple conduit entries, all entries will have the same thread form. Only use plugs, adapters, glands, or conduit with a compatible thread form when closing these entries.
- When installing in a hazardous location, use only appropriately listed or Ex certified plugs, adapters, or glands in cable/conduit entries.

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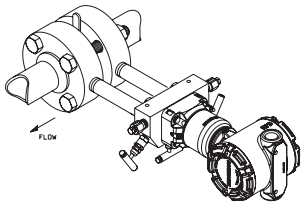
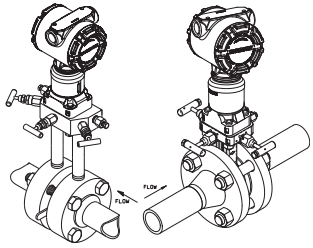
Step 1: Mount the transmitter

Liquid flow applications



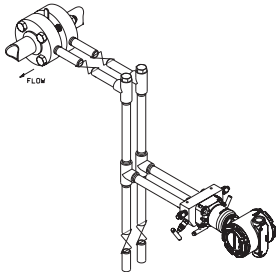
1. Place taps to the side of the line.
2. Mount beside or below the taps.
3. Mount the transmitter so that the drain/vent valves are oriented above the process.

Gas flow applications



1. Place taps in the top or side of the line.
2. Mount beside or above the taps.

Steam flow applications



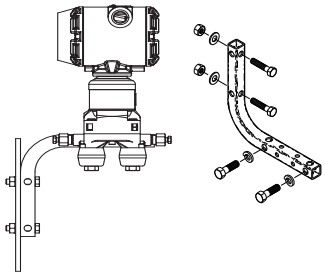
1. Place taps to the side of the line.
2. Mount beside or below the taps.
3. Fill impulse lines with water.

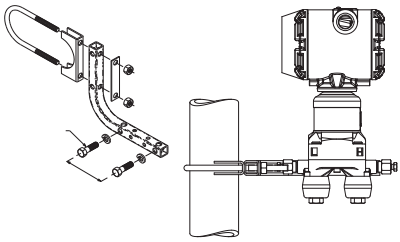
Using a mounting bracket

If the transmitter requires the use of a mounting bracket, use the images below for instructions on how to properly mount the transmitter using the Emerson provided mounting brackets. Use only bolts provided with the transmitter or sold as Emerson spare parts.

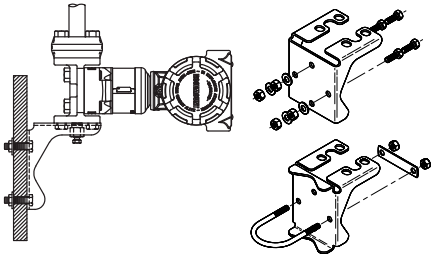
Panel mount	Pipe mount

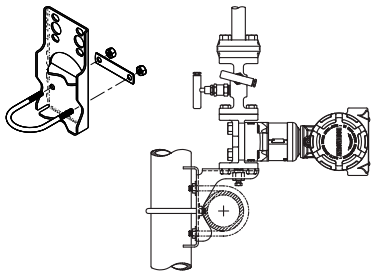
Coplanar flange



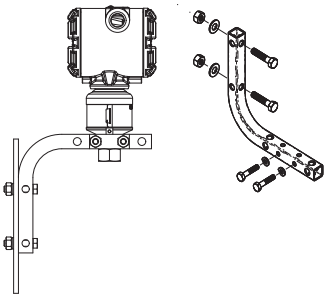


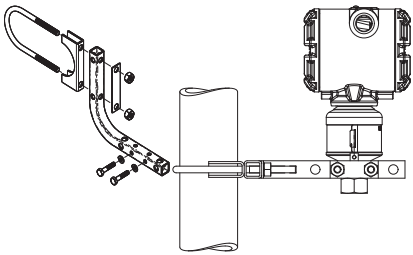
Traditional flange

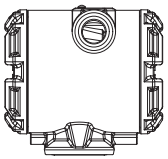
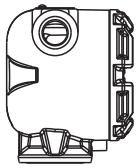
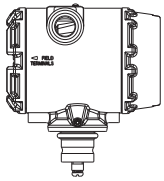




In-line



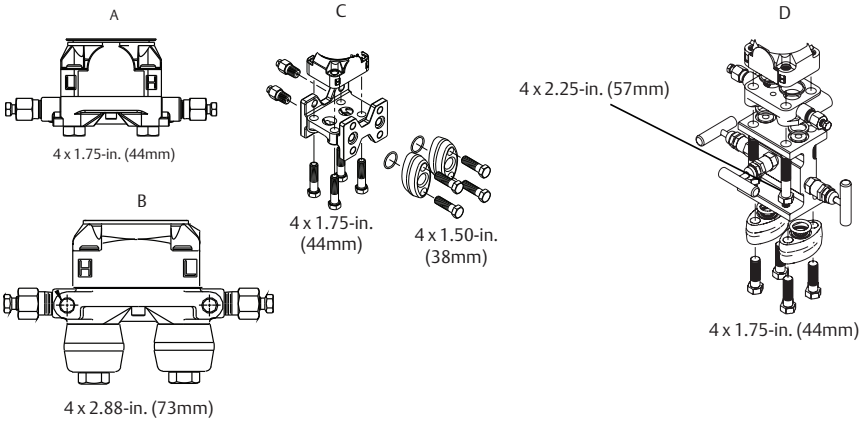


Housings		
PlantWeb®	**Junction box**	**Remote mount display**
		

Bolting considerations

If the transmitter installation requires assembly of the process flanges, manifolds, or flange adaptors, follow these assembly guidelines to ensure a tight seal for optimal performance characteristics of the transmitters. Use only bolts supplied with the transmitter or sold by Emerson as spare parts. Figure 1 illustrates common transmitter assemblies with the bolt length required for proper transmitter assembly.

Figure 1. Common Transmitter Assemblies



A. Transmitter with coplanar flange
B. Transmitter with coplanar flange and optional flange adaptors
C. Transmitter with traditional flange and optional flange adaptors
D. Transmitter with coplanar flange and optional Rosemount Conventional Manifold and flange adapters

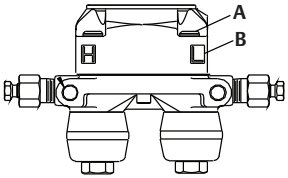
Bolts are typically carbon steel or stainless steel. Confirm the material by viewing the markings on the head of the bolt and referencing Figure 3. If bolt material is not shown in Figure 3, contact the local Emerson Process Management representative for more information.

Use the following bolt installation procedure:

1. Carbon steel bolts do not require lubrication and the stainless steel bolts are coated with a lubricant to ease installation. However, no additional lubricant should be applied when installing either type of bolt.

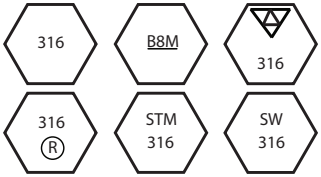
2. Finger-tighten the bolts.
3. Torque the bolts to the initial torque value using a crossing pattern. See Figure 3 for initial torque value.
4. Torque the bolts to the final torque value using the same crossing pattern. See Figure 3 for final torque value.
5. Verify the flange bolts are protruding through the sensor module before applying pressure.

Figure 2. Proper Bolt Installation



A. Bolt
B. Sensor module

Figure 3. Torque Values for the Flange and Flange Adaptor Bolts

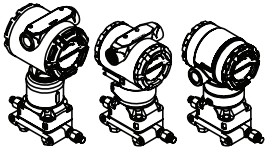
Bolt material	Head markings	Initial torque	Final torque
Carbon Steel (CS)		300 in.-lbs.	650 in.-lbs.
Stainless Steel (SST)		150 in.-lbs.	300 in.-lbs.

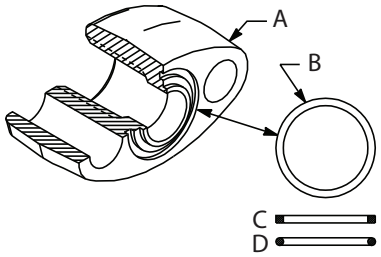
O-rings with flange adaptors

WARNING

Failure to install proper flange adaptor O-rings may cause process leaks, which can result in death or serious injury. The two flange adaptors are distinguished by unique O-ring grooves. Only use the O-ring designed for its specific flange adaptor, as shown below.

Rosemount 3051S/3051/2051/4088





A. Flange Adaptor
B. O-ring
C. PTFE based profile is square
D. Elastomer profile is round

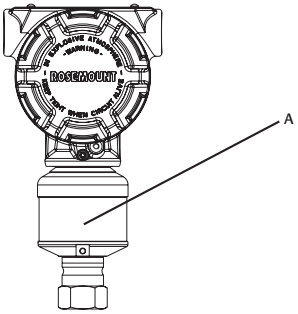
⚠ Whenever the flanges or adaptors are removed, visually inspect the O-rings. Replace them if there are any signs of damage, such as nicks or cuts. If you replace the O-rings, re-torque the flange bolts and alignment screws after installation to compensate for seating of the O-rings.

In-line gage transmitter orientation

The low side pressure port (atmospheric reference) on the in-line gage transmitter is located under the sensor module neck label. (See Figure 4)

Keep the vent path free of any obstruction, including but not limited to paint, dust, and lubrication by mounting the transmitter so that any contaminants can drain away.

Figure 4. In-Line Gage Transmitter



A. Low side pressure port (under neck label)

Step 2: Consider housing rotation

To improve field access to wiring or to better view the optional LCD display:

1. Loosen the housing rotation set screw.
2. First rotate the housing clockwise to the desired location. If the desired location cannot be achieved due to thread limit, rotate the housing counter clockwise to the desired location (up to 360° from thread limit).
3. Retighten the housing rotation set screw up to 30 in-lbs.

Figure 5. Transmitter Housing Set Screw

A. Housing rotation set screw ($^{3}/_{32}$-in.)

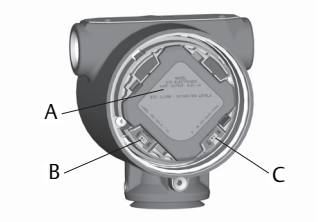
Step 3: Set switches and jumpers

If alarm and security adjustment option is not installed, the transmitter will operate normally with the default alarm condition alarm “high” and the security “off”.

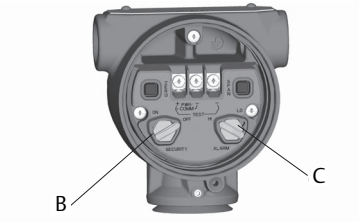
1. Do not remove the transmitter covers in explosive atmospheres when the circuit is live. If the transmitters is live, set the loop to manual and remove power.
2. Remove the electronics compartment cover. On the PlantWeb housing the cover is opposite the field terminals side, or on the junction box housing remove the terminal block cover. Do not remove the housing cover in explosive environments.
3. On the PlantWeb housing, slide the security and alarm switches into the preferred position by using a small screwdriver (An LCD display or an adjustment module must be in place to activate the switches). On the junction box housing pull the pins out and rotate 90° into desired position to set the security and alarm.
4. Reinstall the housing cover so that metal contacts metal to meet explosion-proof requirements.

Figure 6. Transmitter switch and jumper configuration

PlantWeb



Junction box



A. Meter/adjustment module
B. Security
C. Alarm

Step 4: Connect wiring and power up

Use the following steps to wire the transmitter:

1. Remove and discard orange conduit plugs.
2. Remove the housing cover labeled “Field Terminals.”
3. Connect the positive lead to the “+” terminal, and the negative lead to the “–” terminal.

Note

Do not connect the power across the test terminals. Power could damage the test diode in the test connection. Twisted pairs yield best results. Use 24 AWG to 14 AWG wire and do not exceed 5,000 feet (1500 meters). For single compartment housing (Junction Box housing), shielded signal wiring should be used in high EMI/RFI environments.

4. Plug and seal the unused conduit connection with the provided conduit plug.

NOTICE

When the enclosed threaded plug is utilized in the conduit opening, it must be installed with a minimum thread engagement in order to comply with explosion-proof requirements. For straight threads, a minimum of 7 threads must be engaged. For tapered threads, a minimum of five threads must be engaged.

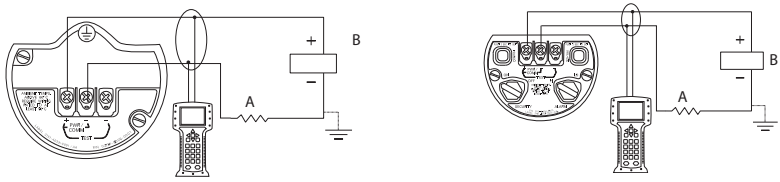
5. If applicable, install wiring with a drip loop. Arrange the drip loop so the bottom is lower than the conduit connections and the transmitter housing.

⚠ 6. Reinstall the housing cover and tighten so the cover is fully seated with metal to metal contact between the housing and cover in order to meet explosion proof requirements.

The figures below show the wiring connections necessary to power a 3051S and enable communications with a hand-held Field Communicator.

Figure 7. Transmitter Wiring

PlantWeb housing wiring **Junction box housing wiring**



A. RL ≥ 250 Ω
B. Power supply

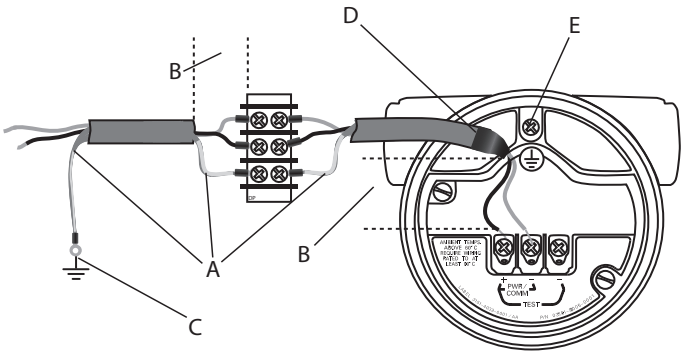
Note
Installation of the transient protection terminal block does not provide transient protection unless the 3051S case is properly grounded.

Signal wiring grounding

Do not run signal wiring in conduit or open trays with power wiring, or near heavy electrical equipment. Grounding terminations are provided on the sensor module and inside the Terminal Compartment. These grounds are used when transient protection terminal blocks are installed or to fulfill local regulations. See Step 2 below for more information on how the cable shield should be grounded.

1. Remove the Field Terminals housing cover.
2. Connect the wiring pair and ground as indicated in Figure 8.
   a. The cable shield should:
   - Be trimmed close and insulated from touching the transmitter housing
   - Continuously connect to the termination point
   - Be connected to a good earth ground at the power supply end

Figure 8. Wiring



A. Insulate shield
B. Minimize distance
C. Connect shield back to the power supply ground
D. Trim shield and insulate
E. Safety ground

3. Replace the housing cover. It is recommended the cover be tightened until there is no gap between the cover and the housing.
4. Plug and seal the unused conduit connection with the provided conduit plug.

Remote display wiring and power up (if applicable)

The remote mount display and Interface system consists of a local transmitter and a remote mount LCD display assembly. The local 3051S Transmitter assembly includes a Junction Box housing with a three-position terminal block integrally mounted to a sensor module. The remote mount LCD display assembly consists of a dual compartment PlantWeb housing with a seven position terminal block. See Figure 9 on page 12 for complete wiring instructions. The following is a list of necessary information specific to the remote mount display system:

- Each terminal block is unique for the remote display system.
- A 316 SST Housing Adaptor is permanently secured to the remote mount LCD display PlantWeb housing, providing an external ground and a means for field mounting with the provided mounting bracket.
- A cable is required for wiring between the transmitter and remote mount LCD display. The cable length is limited to 100 ft.
- 50 ft. (option M8) or 100 ft. (option M9) cable is provided for wiring between the transmitter and remote mount LCD display. Option M7 does not include cable; see recommended specifications below.

Cable type

Recommend Madison AWM Style 2549 cable. Other comparable cable may be used as long as it has independent dual twisted shielded pair wires with an outer shield. The power wires must be 22 AWG minimum and the CAN communication wires must be 24 AWG minimum.

Cable length

The cable length is up to 100 feet depending upon cable capacitance.

Cable capacitance

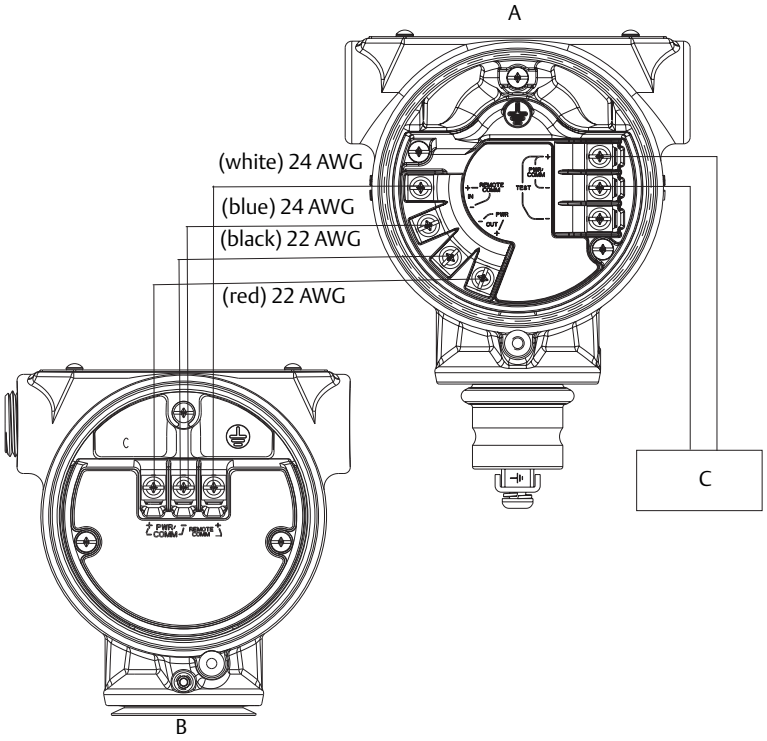
The capacitance from the CAN communications line to the CAN return line as wired must be less than 5000 picofarads total. This allows up to 50 picofarads per foot for a 100 foot cable.

Intrinsic safety consideration

The transmitter assembly with remote display has been approved with Madison AWM Style 2549 cable. Alternate cable may be used as long as the transmitter with remote display and cable is configured according to the installation control drawing or certificate. Refer to appropriate approval certificate or control drawing in Appendix B of the 3051S Reference Manual for remote cable IS requirements.

Important
Do not apply power to the remote communications terminal. Follow wiring instructions carefully to prevent damage to system components.

Figure 9. Remote Mount Display Wiring Diagram



A. Remote mount display
B. Junction box housing
C. 4-20 mA

Note

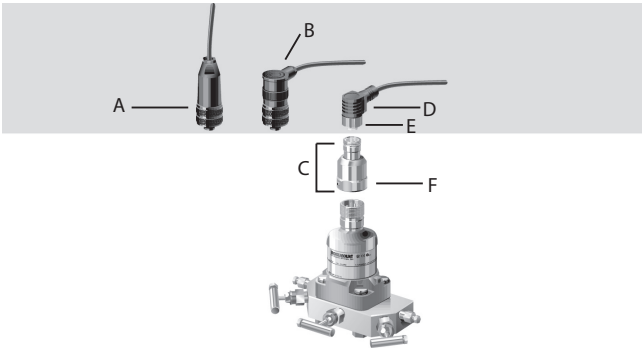
Wire colors provided on page 12 are per Madison AWM Style 2549 cable. Wire color may vary depending on cable selected.

Madison AWM Style 2549 cable includes a ground shield. This shield must be connected to earth ground at either the sensor module or the remote display, but not both.

Quick connect wiring (if applicable)

As standard, the 3051S Quick Connect arrives properly assembled to the sensor module and is ready for installation. Cordsets and field wireable connectors (in shaded area) are sold separately.

Figure 10. Rosemount 3051S Quick Connect Exploded View



A. Straight field wireable connector(1)(4)
B. Right angle field wireable connector(3)(4)
C. Quick Connect housing
D. Cordset(2)
E. Coupling nut
F. Quick Connect coupling nut

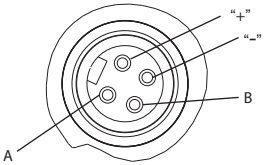
1.Order part number 03151-9063-0001.
2. Supplied by cordset vendor.
3. Order part number 03151-9063-0002.
4. Field wiring supplied by customer

Important

If Quick Connect is ordered as a 300S spare housing or is removed from the sensor module, follow the instructions below for proper assembly prior to field wiring.

1. Place the Quick Connect onto the sensor module. To ensure proper pin alignment, remove coupling nut prior to installing quick connect onto the sensor module.
2. Place coupling nut over quick connect and wrench tighten to a maximum of 300 in-lb. (34 N-m).
3. Tighten the set screw up to 30 in-lbs using a $^{3}/_{32}$-in. hex wrench.
4. Install cordset/field wireable connectors onto the Quick Connect. Do not over tighten.

Figure 11. Quick Connect Housing Pin-Out



A. Ground
B. No connection

Note
For other wiring details, refer to pin-out drawing and the cordset manufacturer's installation instructions.

Conduit electrical connector wiring (option GE or GM)

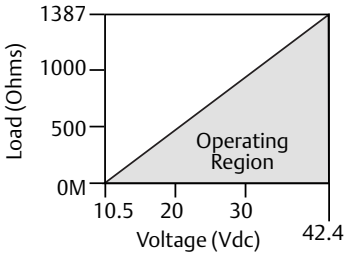
For 3051S Transmitters with conduit electrical connectors GE or GM, refer to the cordset manufacturer's installation instructions for wiring details. For FM Intrinsically Safe, non-incendive or FM FISCO Intrinsically Safe hazardous locations, install in accordance with Rosemount drawing 03151-1009. See Appendix B of the 3051S Reference Manual.

Power supply

The DC power supply should provide power with less than two percent ripple. The total resistance load is the sum of the resistance of the signal leads and the load resistance of the controller, indicator, and related pieces. Note the resistance of intrinsic safety barriers, if used, must be included.

Figure 12. Load Limitation Transmitter

Maximum Loop Resistance =
43.5 * (Power Supply Voltage – 10.5)



The Field Communicator requires a minimum loop resistance of 250Ω for communication.

Step 5: Verify configuration

Use any HART-compliant master to communicate with and verify configuration of the 3051S.

Field Communicator user interface

Fast Key Sequences vary with the Device Driver Revision. The Traditional Interface Fast Key Sequences apply to DD Rev. 8 or older and they can be found on page 16 The Device Dashboard Fast Key Sequences apply to DD Rev. 9 or newer and they can be found on page 17.

Figure 13. Traditional Interface - Device Revision 6 or 7 and DD Revision 7

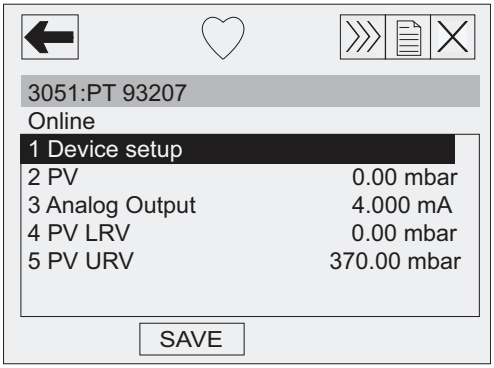
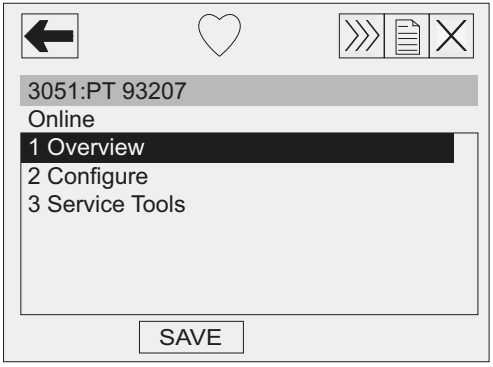


Figure 14. Device Dashboard - Device Revision 7 and DD Revision 9



A check (✓) indicates the basic configuration parameters. At a minimum, these parameters should be verified as part of the configuration and startup procedure.

Table 1. Traditional Interface - Device Revision 6 or 7 and DD Revision 7 Fast Key Sequence

	Function	Fast Key sequence
	Alarm Level Configuration	1, 4, 2, 7, 7
	Alarm and Saturation Levels	1, 4, 2, 7
	Analog Output Alarm Direction	1, 4, 2, 7, 6
	Analog Output Trim	1, 2, 3, 2
	Burst Mode On/Off	1, 4, 3, 3, 3
	Burst Options	1, 4, 3, 3, 4
✓	Damping	1, 3, 6
	Date	1, 3, 4, 1
	Descriptor	1, 3, 4, 2
	Digital To Analog Trim (4-20 mA Output)	1, 2, 3, 2, 1
	Field Device Information	1, 4, 4, 1
	LCD Display Configuration	1, 3, 7
	Loop Test	1, 2, 2
	Lower Sensor Trim	1, 2, 3, 3, 2
	Message	1, 3, 4, 3
	Number of Requested Preambles	1, 4, 3, 3, 2
	Pressure Alert Configuration	1, 4, 3, 5, 3
	Poll Address	1, 4, 3, 3, 1
	Poll a Multidropped Transmitter	Left Arrow, 3, 1, 1
	Remapping	1, 4, 3, 6
	Rerange- Keypad Input	1, 2, 3, 1, 1
	Saturation Level Configuration	1, 4, 2, 7, 8
	Scaled D/A Trim (4–20 mA Output)	1, 2, 3, 2, 2
	Scaled Variable Configuration	1, 4, 3, 4, 7
	Self Test (Transmitter)	1, 2, 1, 1
	Sensor Information	1, 4, 4, 2
	Sensor Temperature	1, 1, 4
	Sensor Trim	1, 2, 3, 3
	Sensor Trim Points	1, 2, 3, 3, 5
	Status	1, 2, 1, 2
✓	Tag	1, 3, 1
	Temperature Alert Configuration	1, 4, 3, 5, 4
✓	Transfer Function (Setting Output Type)	1, 3, 5
	Transmitter Security (Write Protect)	1, 3, 4, 5
✓	Units (Process Variable)	1, 3, 2

Table 1. Traditional Interface - Device Revision 6 or 7 and DD Revision 7 Fast Key Sequence

Function	Fast Key sequence
Upper Sensor Trim	1, 2, 3, 3, 3
Zero Trim	1, 2, 3, 3, 1

Table 2. Device Dashboard - Device Revision 7 and DD Revision 9 Fast Key Sequence

	Function	Fast Key sequence
	Alarm and Saturation Levels	2,2,1,7
	Burst Mode Control	2,2,4,2
	Burst Option	2,2,4,3
	Custom Display Configuration	2,1,3
✓	Damping	2,2,1,5
	Date	2,2,5,4
	Descriptor	2,2,5,5
	Digital to Analog Trim (4 - 20 mA Output)	3,4,2
	Disable Zero & Span Adjustment	2,2,7,2
	Rerange with Keypad	2,2,1,3,1
	Loop Test	3,5,1
	Lower Sensor Trim	3,4,1,2
	Message	2,2,5,6
	Range Values	2,2,1,3
	Scaled D/A Trim (4 - 20 mA Output)	3,4,2
	Sensor Temperature/Trend (3051S)	3,3,3
✓	Tag	2,2,5,1
✓	Transfer Function	2,2,1,4
	Transmitter Security (Write Protect)	2,2,7,1
✓	Units	2,2,1,2
	Upper Sensor Trim	3,4,1,1
	Zero Trim	3,4,1,3

Step 6: Trim the transmitter

Transmitters are shipped fully calibrated per request or by the factory default of full scale (lower range value = zero, upper range value = upper range limit).

Zero trim

A zero trim is a single-point adjustment used for compensating mounting position and line pressure effects. When performing a zero trim, ensure the equalizing valve is open and all wet legs are filled to the correct level.

- If zero offset is less than 3% of true zero, follow the Using the Field Communicator instructions below to perform a zero trim.
- If zero offset is greater than 3% of true zero, follow the Using the transmitter zero adjustment button instructions below to rerange.
- If hardware adjustments are not available, see the 3051S Reference Manual (document number 00809-0100-4801) to perform a rerange using the Field Communicator.

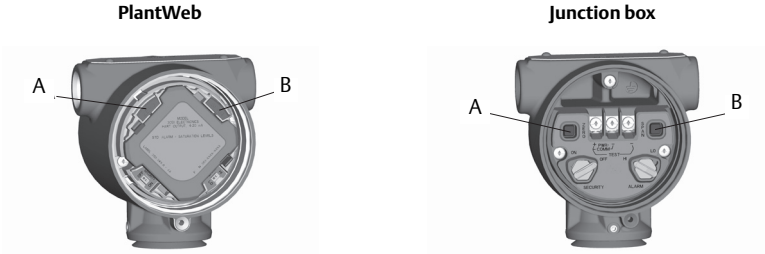
Using the Field Communicator

1. Equalize or vent the transmitter and connect Field Communicator.
2. At the menu, input the Fast Key sequence (refer to Table 1 or Table 2).
3. Follow the commands to perform a zero trim.

Using the transmitter zero adjustment button

Push and hold the zero adjustment button for at least two seconds but no longer than ten seconds.

Figure 15. Transmitter Adjustment Buttons



A. Zero
B. Span

Safety instrumented systems installation

For Safety Certified installations, refer to the 3051S Product Manual (document number 00809-0100-4801) for installation procedure and system requirements.

Product Certifications

Rev 1.0

European Directive Information

A copy of the EC Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the EC Declaration of Conformity can be found at www.rosemount.com.

Ordinary Location Certification from FM Approvals

As standard, the transmitter has been examined and tested to determine that the design meets the basic electrical, mechanical, and fire protection requirements by FM Approvals, a nationally recognized test laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

Installing Equipment in North America

The US National Electrical Code (NEC) and the Canadian Electrical Code (CEC) permit the use of Division marked equipment in Zones and Zone marked equipment in Divisions. The markings must be suitable for the area classification, gas, and temperature class. This information is clearly defined in the respective codes.

USA

E5 FM Explosionproof (XP) and Dust-Ignitionproof (DIP)
Certificate: 3008216
Standards: FM Class 3600 – 2011, FM Class 3615 – 2006, FM Class 3616 – 2011, FM Class 3810 – 2005, ANSI/NEMA 250 – 2003
Markings: XP CL I, DIV 1, GP B, C, D; DIP CL II, DIV 1, GP E, F, G; CL III; T5(-50 °C ≤ T_a ≤ +85 °C); Factory Sealed; Type 4X

I5 FM Intrinsic Safety (IS) and Nonincendive (NI)
Certificate: 3012350
Standards: FM Class 3600 – 2011, FM Class 3610 – 2010, FM Class 3611 – 2004, FM Class 3810 – 2005, NEMA 250 – 2003
Markings: IS CL I, DIV 1, GP A, B, C, D; CL II, DIV 1, GP E, F, G; Class III; Class 1, Zone 0 AEx ia IIC T4; NI CL 1, DIV 2, GP A, B, C, D; T4(-50 °C ≤ T_a ≤ +70 °C) [HART]; T4(-50 °C ≤ T_a ≤ +60 °C) [Fieldbus]; when connected per Rosemount drawing 03151-1006; Type 4X

Special Condition for Safe Use:

1. The Model 3051S/3051S-ERS Pressure Transmitter contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact and friction.

Note
Transmitters marked with NI CL 1, DIV 2 can be installed in Division 2 locations using general Division 2 wiring methods or Nonincendive Field Wiring (NIFW). See Drawing 03151-1006.

IE FM FISCO

Certificate: 3012350

Standards: FM Class 3600 – 2011, FM Class 3610 – 2010, FM Class 3611 – 2004, FM Class 3810 – 2005, NEMA 250 – 2003

Markings: IS CL I, DIV 1, GP A, B, C, D; T4(-50 °C ≤ T_a ≤ +60 °C); when connected per Rosemount drawing 03151-1006; Type 4X

Special Condition for Safe Use:

1. The Model 3051S/3051S-ERS Pressure Transmitter contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact and friction.

Canada

E6 CSA Explosionproof, Dust-Ignitionproof, and Division 2

Certificate: 1143113

Standards: CAN/CSA C22.2 No. 0-10, CSA Std C22.2 No. 25-1966, CSA Std C22.2 No. 30-M1986, CAN/CSA C22.2 No. 94-M91, CSA Std C22.2 No. 142-M1987, CSA Std C22.2 No. 213-M1987, ANSI/ISA 12.27.01-2003, CSA Std C22.2 No. 60529:05

Markings: Explosionproof Class I, Division 1, Groups B, C, D; Dust-Ignitionproof Class II, Division 1, Groups E, F, G; Class III; suitable for Class I, Zone 1, Group IIB+H2, T5; suitable for Class I, Division 2, Groups A, B, C, D; suitable for Class I, Zone 2, Group IIC, T5; when connected per Rosemount drawing 03151-1013; Type 4X

I6 CSA Intrinsically Safe

Certificate: 1143113

Standards: CAN/CSA C22.2 No. 0-10, CSA Std C22.2 No. 30-M1986, CAN/CSA C22.2 No. 94-M91, CSA Std C22.2 No. 142-M1987, CSA Std C22.2 No. 157-92, ANSI/ISA 12.27.01-2003, CSA Std C22.2 No. 60529:05

Markings: Intrinsically Safe Class I, Division 1; suitable for Class 1, Zone 0, IIC, T3C; when connected per Rosemount drawing 03151-1016; Type 4X

IF CSA FISCO

Certificate: 1143113

Standards: CAN/CSA C22.2 No. 0-10, CSA Std C22.2 No. 30-M1986, CAN/CSA C22.2 No. 94-M91, CSA Std C22.2 No. 142-M1987, CSA Std C22.2 No. 157-92, ANSI/ISA 12.27.01-2003, CSA Std C22.2 No. 60529:05

Markings: FISCO Intrinsically Safe Class I, Division 1; suitable for Class I, Zone 0; T3C; when installed per Rosemount drawing 03151-1016; Type 4X

Europe

E1 ATEX Flameproof

Certificate: KEMA 00ATEX2143X

Standards: EN 60079-0:2012, EN 60079-1: 2007, EN 60079-26:2007 (3051SFx models with RTD are certified to EN60079-0:2006)

Markings: ⟨Ex⟩ II 1/2 G Ex d IIC T6...T4 Ga/Gb, T6(-60 °C ≤ T_a ≤ +70 °C), T5/T4(-60 °C ≤ T_a ≤ +80 °C)

Temperature class	Process temperature
T6	-60 °C to +70 °C
T5	-60 °C to +80 °C
T4	-60 °C to +120 °C

Special Conditions for Safe Use (X):

1. The device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer's instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.
2. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.

I1 ATEX Intrinsic Safety

Certificate: BAS01ATEX1303X

Standards: EN 60079-0: 2012, EN 60079-11: 2012

Markings: ⟨Ex⟩ II 1 G Ex ia IIC T4 Ga, T4(-60 °C ≤ T_a ≤ +70 °C)

	U_i	I_i	P_i	C_i	L_i
SuperModule™	30 V	300 mA	1.0 W	30 nF	0
3051S...A; 3051SF...A; 3051SAL...C	30 V	300 mA	1.0 W	12 nF	0
3051S...F; 3051SF...F	30 V	300 mA	1.3 W	0	0
3051S ...A...M7, M8, or M9; 3051SF ...A...M7, M8, or M9; 3051SAL...C... M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	60µH
3051SAL or 3051SAM	30 V	300 mA	1.0 W	12 nF	33µH
3051SAL...M7, M8, or M9 3051SAM...M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	93µH
RTD Option for 3051SF	5 V	500 mA	0.63 W	N/A	N/A

Special Conditions for Safe Use (X):

1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500 V test as defined in Clause 6.3.13 of EN 60079-11:2012. This must be taken into account during installation.

2. The terminal pins of the Model 3051S SuperModule must be provided with a degree of protection of at least IP20 in accordance with IEC/EN 60529.
3. The Model 3051S enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in a zone 0 area.

IA ATEX FISCO

Certificate: BAS01ATEX1303X

Standards: EN 60079-0: 2012, EN 60079-11: 2012

Markings: Ⓔx II 1 G Ex ia IIC T4 Ga, T4(-60 °C ≤ T_a ≤ +70 °C)

	FISCO
Voltage U_i	17.5 V
Current I_i	380 mA
Power P_i	5.32 W
Capacitance C_i	0
Inductance L_i	0

Special Conditions for Safe Use (X):

1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500 V test as defined in Clause 6.3.13 of EN 60079-11:2012. This must be taken into account during installation.
2. The terminal pins of the Model 3051S SuperModule must be provided with a degree of protection of at least IP20 in accordance with IEC/EN 60529.
3. The Model 3051S enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in a zone 0 area.

ND ATEX Dust

Certificate: BAS01ATEX1374X

Standards: EN 60079-0: 2012, EN 60079-31: 2009

Markings: Ⓔx II 1 D Ex ta IIIC T105 °C T_{500} 95 °C Da, (-20 °C ≤ T_a ≤ +85 °C), V_{max} = 42.4V

Special Conditions for Safe Use (X):

1. Cable entries must be used which maintain the ingress protection of the enclosure to at least IP66.
2. Unused cable entries must be filled with suitable blanking plugs which maintain the ingress protection of the enclosure to at least IP66.
3. Cable entries and blanking plugs must be suitable for the ambient temperature range of the apparatus and capable of withstanding a 7 J impact test.
4. The SuperModule(s) must be securely screwed in place to maintain the ingress protection of the enclosure(s).

N1 ATEX Type n

Certificate: BAS01ATEX3304X

Standards: EN 60079-0: 2012, EN 60079-15: 2010

Markings: ⟨Ex⟩ II 3 G Ex nA IIC T5 Gc, (-40 °C ≤ T_a ≤ +85 °C), V_{max} = 45V

Special Condition for Safe Use (X):

1. The equipment is not capable of withstanding the 500 V insulation test required by clause 6.5 of EN 60079-15:2010. This must be taken into account when installing the equipment.

Note

RTD Assembly is not included with the 3051SFx Type n Approval.

International

E7 IECEx Flameproof and Dust

Certificate: IECEx KEM 08.0010X (Flameproof)

Standards: IEC 60079-0:2011, IEC 60079-1: 2007, IEC 60079-26:2006 (3051SFx models with RTD are certified to IEC 60079-0:2004)

Markings: Ex d IIC T6...T4 Ga/Gb, T6(-60 °C ≤ T_a ≤ +70 °C), T5/T4(-60 °C ≤ T_a ≤ +80 °C)

Temperature class	Process temperature
T6	-60 °C to +70 °C
T5	-60 °C to +80 °C
T4	-60 °C to +120 °C

Special Conditions for Safe Use (X):

1. The device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer's instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.
2. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.

Certificate: IECEx BAS 09.0014X (Dust)

Standards: IEC 60079-0:2011, IEC 60079-31:2008

Markings: Ex ta IIIC T 105 °C T_{500} 95 °C Da, (-20 °C ≤ T_a ≤ +85 °C), V_{max} = 42.4V

Special Conditions for Safe Use (X):

1. Cable entries must be used which maintain the ingress protection of the enclosure to at least IP66.
2. Unused cable entries must be filled with suitable blanking plugs which maintain the ingress protection of the enclosure to at least IP66.
3. Cable entries and blanking plugs must be suitable for the ambient temperature range of the apparatus and capable of withstanding a 7 J impact test.
4. The 3051S SuperModule must be securely screwed in place to maintain the ingress protection of the enclosure.

I7 IECEx Intrinsic Safety
Certificate: IECEx BAS 04.0017X
Standards: IEC 60079-0: 2011, IEC 60079-11: 2011
Markings: Ex ia IIC T4 Ga, T4(-60 °C ≤ T_a ≤ +70 °C)

	U_i	I_i	P_i	C_i	L_i
SuperModule	30 V	300 mA	1.0 W	30 nF	0
3051S...A; 3051SF...A; 3051SAL...C	30 V	300 mA	1.0 W	12 nF	0
3051S...F; 3051SF...F	30 V	300 mA	1.3 W	0	0
3051S ...A...M7, M8, or M9; 3051SF ...A...M7, M8, or M9; 3051SAL...C... M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	60µH
3051SAL or 3051SAM	30 V	300 mA	1.0 W	12 nF	33µH
3051SAL...M7, M8, or M9 3051SAM...M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	93µH
RTD Option for 3051SF	5 V	500 mA	0.63 W	N/A	N/A

Special Conditions for Safe Use (X):

1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500 V test as defined in Clause 6.3.13 of EN 60079-11:2012. This must be taken into account during installation.
2. The terminal pins of the Model 3051S SuperModule must be provided with a degree of protection of at least IP20 in accordance with IEC/EN 60529.
3. The Model 3051S enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in a zone 0 area.

I7 IECEx Intrinsic Safety – Group I - Mining (I7 with Special A0259)
Certificate: IECEx TSA 14.0019X
Standards: IEC 60079-0: 2011, IEC 60079-11: 2011
Markings: Ex ia I Ma (-60 °C ≤ T_a ≤ +70 °C)

	U_i	I_i	P_i	C_i	L_i
SuperModule	30 V	300 mA	1.0 W	30 nF	0
3051S...A; 3051SF...A; 3051SAL...C	30 V	300 mA	1.0 W	12 nF	0
3051S...F; 3051SF...F	30 V	300 mA	1.3 W	0	0
3051S ...A...M7, M8, or M9; 3051SF ...A...M7, M8, or M9; 3051SAL...C... M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	60µH
3051SAL or 3051SAM	30 V	300 mA	1.0 W	12 nF	33µH
3051SAL...M7, M8, or M9 3051SAM...M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	93µH
RTD Option for 3051SF	5 V	500 mA	0.63 W	N/A	N/A

Special Conditions for Safe Use (X):

1. If the apparatus is fitted with optional 90 V transient suppressor, it is not capable of withstanding the 500 V insulation test required by Clause 6.3.13 of IEC60079-11:2011. This must be taken into account when installing the apparatus.
2. It is a condition of safe use that the above input parameters shall be taken into account during installation.
3. It is a condition of manufacture that only the apparatus fitted with housing, covers and sensor module housing made out of stainless steel are used in Group I applications.

IG IECEx FISCO

Certificate: IECEx BAS 04.0017X

Standards: IEC 60079-0: 2011, IEC 60079-11: 2011

Markings: Ex ia IIC T4 Ga, T4(-60 °C ≤ T_a ≤ +70 °C)

	FISCO
Voltage U_i	17.5 V
Current I_i	380 mA
Power P_i	5.32 W
Capacitance C_i	0
Inductance L_i	0

Special Conditions for Safe Use (X):

1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500 V test as defined in Clause 6.3.13 of EN 60079-11:2012. This must be taken into account during installation.

2. The terminal pins of the Model 3051S SuperModule must be provided with a degree of protection of at least IP20 in accordance with IEC/EN 60529.
3. The Model 3051S enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in a zone 0 area.

IG IECEx Intrinsic Safety – Group I - Mining (IG with Special A0259)
Certificate: IECEx TSA 14.0019X
Standards: IEC 60079-0: 2011, IEC 60079-11: 2011
Markings: FISCO FIELD DEVICE Ex ia I Ma (-60 °C ≤ T_a ≤ +70 °C)

	FISCO
Voltage U_i	17.5 V
Current I_i	380 mA
Power P_i	5.32 W
Capacitance C_i	0
Inductance L_i	0

Special Conditions for Safe Use (X):

1. If the apparatus is fitted with optional 90 V transient suppressor, it is not capable of withstanding the 500 V insulation test required by Clause 6.3.13 of IEC60079-11:2011. This must be taken into account when installing the apparatus.
2. It is a condition of safe use that the above input parameters shall be taken into account during installation.
3. It is a condition of manufacture that only the apparatus fitted with housing, covers and sensor module housing made out of stainless steel are used in Group I applications.

N7 IECEx Type n
Certificate: IECEx BAS 04.0018X
Standards: IEC 60079-0: 2011, IEC 60079-15: 2010
Markings: Ex nA IIC T5 Gc, (-40 °C ≤ T_a ≤ +85 °C)

Special Condition for Safe Use (X):

1. The equipment is not capable of withstanding the 500 V insulation test required by clause 6.5 of EN 60079-15:2010. This must be taken into account when installing the equipment.

Brazil

E2 INMETRO Flameproof
Certificate: CEPEL 03.0140X [Mfg USA, Singapore, Germany],
CEPEL 07.1413X [Mfg Brazil]
Standards: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-1:2009,
ABNT NBR IEC 60529:2009
Markings: Ex d IIC T* Ga/Gb, T6(-40 °C ≤ T_a ≤ +65 °C), T5(-40 °C ≤ T_a ≤ +80 °C),
IP66*

Special Conditions for Safe Use (X):

1. For ambient temperature above 60 °C, cable wiring must have minimum isolation temperature of 90 °C, to be in accordance to equipment operation temperature.
2. The device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer's instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.

I2 INMETRO Intrinsic Safety

Certificate: CEPEL 05.0722X [Mfg USA, Singapore, Germany],
CEPEL 07.1414X [Mfg Brazil]

Standards: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-11:2009, ABNT NBR IEC 60079-26:2008, ABNT NBR IEC 60529:2009

Markings: Ex ia IIC T4 Ga, T4(-20 °C ≤ T_a ≤ +70 °C), IP66*

Special Condition for Safe Use (X):

1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500 V test as defined in Clause 6.4.12 of IEC 60079-11. This must be taken into account during installation.

	U_i	I_i	P_i	C_i	L_i
SuperModule	30 V	300 mA	1.0 W	30 nF	0
3051S...A; 3051SF...A; 3051SAL...C	30 V	300 mA	1.0 W	11.4 nF	0
3051S...F; 3051SF...F	30 V	300 mA	1.3 W	0	0
3051S ...A...M7, M8, or M9; 3051SF ...A...M7, M8, or M9; 3051SAL...C... M7, M8, or M9	30 V	300 mA	1.0 W	11.4 nF	60µH
3051SAL or 3051SAM	30 V	300 mA	1.0 W	11.4 nF	33µH
3051SAL...M7, M8, or M9 3051SAM...M7, M8, or M9	30 V	300 mA	1.0 W	11.4 nF	93µH
RTD Option for 3051SF	5 V	500 mA	0.63 W	N/A	N/A

IB INMETRO FISCO

Certificate: CEPEL 05.0722X [Mfg USA, Singapore, Germany],
CEPEL 07.1414X [Mfg Brazil]

Standards: ABNT NBR IEC 60079-0:2008, ABNT NBR IEC 60079-11:2009, ABNT NBR IEC 60079-26:2008, ABNT NBR IEC 60529:2009

Markings: Ex ia IIC T4 Ga, T4(-20 °C ≤ T_a ≤ +40 °C), IP66*

	FISCO
Voltage U_i	15 V
Current I_i	215 mA (IIC) 500 mA (IIB)
Power P_i	2 W (IIC) 5.32 W (IIB)
Capacitance C_i	0
Inductance L_i	0

Special Condition for Safe Use (X):

1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500V test as defined in Clause 6.4.12 of IEC 60079-11. This must be taken into account during installation.

China

E3 China Flameproof and Dust Ignition-proof

Certificate: 3051S: GYJ111400X [Mfg USA, China, Singapore]
3051SFx: GYJ11.1711X [Mfg USA, China, Singapore]
3051S-ERS: GYJ101345X [Mfg USA, China, Singapore]

Standards: 3051S: GB3836.1-2000, GB3836.2-2000, GB12476.1-2000
3051SFx: GB3836.1-2010, GB3836.2-2010, GB3836.20-2010, GB12476.1-2000
3051S-ERS: GB3836.1-2000, GB3836.2-2000

Markings: 3051S: Ex d IIC T5/T6; DIP A20 T_A 105 °C; IP66
3051SFx: Ex d IIC T5/T6 Ga/Gb; DIP A20 T_A 105 °C; IP66
3051S-ERS: Ex d IIC T5/T6

Special Conditions for Safe Use (X):

1. Only the pressure transmitters, consisting of 3051SC Series, 3051ST Series, 3051SL Series and 300S Series, are certified.
2. The ambient temperature range is (-20~+60)°C.
3. The relation between temperature class and maximum temperature of process medium is as follows,

Temperature class	Temperature of process medium (°C)
T5	≤ 95 °C
T4	≤ 130 °C
T3	≤ 190 °C

4. The earth connection facility in the enclosure should be connected reliably.
5. During installation, use and maintenance of transmitter, observe the warning "Don't open the cover when the circuit is alive."
6. During installation, there should be no mixture harm to flameproof housing.

7. Cable entry, certified by NEPSI with type of protection Ex d IIC in accordance with GB3836.1-2000 and GB3836.2-2000, should be applied when installation in hazardous location. 5 full threads should be in engagement when the cable entry is assembled onto the transmitter. When pressure transmitter is used in the presence of combustible dust, the ingress of protection of the cable entry should be IP66.
8. The diameter of cable should observe the instruction manual of cable entry. The compressing nut should be fastened. The aging of seal ring should be changed in time.
9. Maintenance should be done in non-hazardous location.
10. End users are not permitted to change any components inside.
11. When installation, use and maintenance of transmitter, observe following standards:
    GB3836.13-1997 "Electrical apparatus for explosive gas atmospheres Part 13: Repair and overhaul for apparatus used in explosive gas atmospheres"
    GB3836.15-2000 "Electrical apparatus for explosive gas atmospheres Part 15: Electrical installations in hazardous area (other than mines)"
    GB50257-1996 "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering"
    GB15577-1995 "Safe regulation for explosive dust atmospheres"
    GB12476.2-2006 "Electrical apparatus for use in the presence of combustible dust – Part 1-2: Electrical apparatus protected by enclosures and surface temperature limitation – Selection, installation and maintenance"

I3 China Intrinsic Safety

Certificate: 3051S: GYJ111401X [Mfg USA, China, Singapore]
3051SFx: GYJ11.1707X [Mfg USA, China, Singapore]
3051S-ERS: GYJ111265X [Mfg USA, China, Singapore]

Standards: 3051S: GB3836.1-2000, GB3836.4-2000
3051SFx: GB3836.1/4-2010, GB3836.20-2010, GB12476.1-2000
3051S-ERS: GB3836.1-2000, GB3836.4-2000

Markings: 3051S, 3051SFx: Ex ia IIC T4
3051S-ERS: Ex ia IIC T4

Special Conditions for Safe Use (X):

1. Symbol "X" is used to denote specific conditions of use:
   For output code A and F: This apparatus is not capable of withstanding the 500V r.m.s. insulation test required by Clause 6.4.12 of GB3836.4-2000.
2. The ambient temperature range is:

Output code	Ambient temperature
A	-50 °C ≤ T_a ≤ +70°C
F	-50 °C ≤ T_a ≤ +60°C

3. Intrinsically safe parameters:

Output code	Housing code	Display code	Maximum input voltage: U_i (V)	Maximum input current: I_i (mA)	Maximum input power: P_i (W)	Maximum internal parameter: C_i (nF)	Maximum internal parameter: L_i (uH)
A	=00	/	30	300	1	38	0
A	≠00	/	30	300	1	11.4	2.4
A	≠00	M7/M8/M9	30	300	1	0	58.2
F	≠00	/	30	300	1.3	0	0
F FISCO	≠00	/	17.5	500	5.5	0	0

4. The product should be used with Ex-certified associated apparatus to establish explosion protection system that can be used in explosive gas atmospheres. Wiring and terminals should comply with the instruction manual of the product and associated apparatus.
5. The cable between this product and associated apparatus should be shielded cables (the cables must have insulated shield). The shield has to be grounded reliably in non-hazardous area.
6. The product complies to the requirements for FISCO field devices specified in IEC60079-27:2008. For the connection of an intrinsically safe circuit in accordance FISCO model, FISCO parameters of this product are as above.
7. End users are not permitted to change any components inside, but to settle the problem in conjunction with manufacturer to avoid damage to the product.
8. When installation, use and maintenance of this product, observe the following standards:
   GB3836.13-1997 “Electrical apparatus for explosive gas atmospheres Part 13: Repair and overhaul for apparatus used in explosive gas atmospheres”
   GB3836.15-2000 “Electrical apparatus for explosive gas atmospheres Part 15: Electrical installations in hazardous area (other than mines)”
   GB3836.16-2006 “Electrical apparatus for explosive gas atmospheres Part 16: Inspection and maintenance of electrical installation (other than mines)”
   GB50257-1996 “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”

N3 China Type n

Certificate: 3051S: GYJ101112X [Mfg China]
3051SF: GYJ101125X [Mfg China]

Standards: GB3836.1-2000, GB3836.8-2003

Markings: Ex nL IIC T5

Special Conditions for Safe Use (X):

1. Symbol “X” is used to denote specific conditions of use: The apparatus is not capable of withstanding the 500V test to earth for one minute. This must be taken into consideration during installation.
2. The ambient temperature range is: -40 °C ≤ T_a ≤ 70 °C.

3. Cable glands, conduit or blanking plugs, certified by NEPSI with Ex e or Ex n protection type and IP66 degree of protection provided by enclosure, should be used on external connections and redundant cable entries.
4. Energy limiting parameters:

Model	Terminal	Maximum input voltage: U_i (V)	Maximum input current: I_i (mA)	Maximum input power: P_i (W)	Maximum internal parameter: C_i (nF)	Maximum internal parameter: L_i (uH)
3051S-C/T	1 to 5	30	300	1	30	0
3051S HART, 4-20mA/SIS	+,- and CAN	30	300	1	11.4	0
3051S Fieldbus/ PROFIBUS®	+ and -	30	300	1.3	0	0
3051S FISCO	+ and -	17.5	380	5.32	0	0
Remote Mount Housing	+ and -	30	300	1	24	60

Note

Remote mount housing is for direct connection to the Model 3051S HART Terminals +,- and CAN by a cable whose maximum capacitance and inductance do not exceed 24nF and 60uH respectively.

5. 3051S type Pressure Transmitter comply to the requirements for FISCO field devices specified in IEC60079-27:2008. For the connection of an intrinsically safe circuit in accordance FISCO model, FISCO parameters of 3051S Type Pressure Transmitter are listed in the table above.
6. The product should be used with associated energy-limited apparatus certified by NEPSI in accordance with GB 3836.1-2000 and GB 3836.8-2003 to establish explosion protection system that can be used in explosive gas atmospheres.
7. The cables between this product and associated energy-limited apparatus should be shielded cables (the cables must have insulated shield). The shielded has to be grounded reliably in non-hazardous area.
8. Maintenance should be done in non-hazardous location.
9. End users are not permitted to change any components inside, but to settle the problem in conjunction with manufacturer to avoid damage to the product.
10. When installation, use and maintenance of this product, observe following standards:
    GB3836.13-1997 “Electrical apparatus for explosive gas atmospheres Part 13: Repair and overhaul for apparatus used in explosive gas atmospheres”
    GB3836.15-2000 “Electrical apparatus for explosive gas atmospheres Part 15: Electrical installations in hazardous area (other than mines)”
    GB3836.16-2006 “Electrical apparatus for explosive gas atmospheres Part 16: Inspection and maintenance of electrical installation (other than mines)”
    GB50257-1996 “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”.

EAC – Belarus, Kazakhstan, Russia

EM Technical Regulation Customs Union (EAC) Flameproof

Certificate: RU C-US.GB05.B.00835

Markings: Ga/Gb Ex d IIC T6...T4 X

IM Technical Regulation Customs Union (EAC) Intrinsic Safety

Certificate: RU C-US.GB05.B.00835

Markings:0Ex ia IIC T4 Ga X

Japan

E4 Japan Flameproof

Certificate: TC15682, TC15683, TC15684, TC15685, TC15686, TC15687, TC15688, TC15689, TC15690, TC17099, TC17100, TC17101, TC17102, TC18876

Markings: Ex d IIC T6

Republic of Korea

EP Republic of Korea Flameproof

Certificate: 12-KB4BO-0180X [Mfg USA], 11-KB4BO-0068X [Mfg Singapore]

Markings: Ex d IIC T5 or T6

IP Republic of Korea Intrinsic Safety

Certificate: 12-KB4BO-0202X [HART – Mfg USA],
12-KB4BO-0204X [Fieldbus – Mfg USA],
12-KB4BO-0203X [HART – Mfg Singapore],
13-KB4BO-0296X [Fieldbus – Mfg Singapore]

Markings: Ex ia IIC T4

Combinations

K1 Combination of E1, I1, N1, and ND
K2 Combination of E2 and I2
K5 Combination of E5 and I5
K6 Combination of E6 and I6
K7 Combination of E7, I7, and N7
KA Combination of E1, I1, E6, and I6
KB Combination of E5, I5, E6, and I6
KC Combination of E1, I1, E5, and I5
KD Combination of E1, I1, E5, I5, E6, and I6
KG Combination of IA, IE, IF, and IG
KM Combination of EM and IM
KP Combination of EP and IP

Additional Certifications

SBS American Bureau of Shipping (ABS) Type Approval
Certificate: 00-HS145383-6-PDA
Intended Use: Measure gauge or absolute pressure of liquid, gas or vapor applications on ABS classed vessels, marine, and offshore installations.
ABS Rules: 2013 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 4-8-3/1.7, 4-8-3/1.11.1, 4-8-3/13.1

SBV Bureau Veritas (BV) Type Approval
Certificate: 31910/A0 BV
Requirements: Bureau Veritas Rules for the Classification of Steel Ships
Application: Class Notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS

SDN Det Norske Veritas (DNV) Type Approval
Certificate: A-13243
Intended Use: Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft, and Det Norske Veritas' Offshore Standards
Application:

Location classes	
Type	3051S
Temperature	D
Humidity	B
Vibration	A
EMC	A
Enclosure	D / IP66 / IP68

SLL Lloyds Register (LR) Type Approval
Certificate: 11/60002(E3)
Application: Environmental categories ENV1, ENV2, ENV3, and ENV5

D3 Custody Transfer – Measurement Canada Accuracy Approval
Certificate: AG-0501, AV-2380C

Figure 16. Rosemount 3051S Declaration of Conformity

ROSEMOUNT

CE

EC Declaration of Conformity

No: RMD 1044 Rev. V

We,

Rosemount Inc.
8200 Market Boulevard
Chanhassen, MN 55317-9685
USA

declare under our sole responsibility that the product,

Model 3051S Series Pressure Transmitters
Model 3051SF Series Flowmeter Transmitters
Model 300S Housings

manufactured by,

Rosemount Inc.
8200 Market Boulevard
Chanhassen, MN 55317-9685
USA

to which this declaration relates, is in conformity with the provisions of the European Community Directives, including the latest amendments, as shown in the attached schedule.

Assumption of conformity is based on the application of the harmonized standards and, when applicable or required, a European Community notified body certification, as shown in the attached schedule.

(signature)	Vice President of Global Quality (function name - printed)
Kelly Klein (name - printed)	2 Mar 2015 (date of issue)

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EC Declaration of Conformity

No: RMD 1044 Rev. V

EMC Directive (2004/108/EC)

All Models

Harmonized Standards:

EN 61326-1:2006, EN 61326-2-3:2006

PED Directive (97/23/EC)

3051S Series Pressure Transmitters

Model 3051S_CA4; 3051S_CD2, 3, 4, 5 (*also with P0 & P9 option)* Pressure Transmitters

QS Certificate of Assessment – EC Certificate No. 59552-2009-CE-HOU-DNV

Module H Conformity Assessment

Evaluation standards:

ANSI / ISA 61010-1:2004

All other model 3051S Pressure Transmitters

Sound Engineering Practice

Transmitter Attachments: Diaphragm Seal – Process Flange - Manifold

Sound Engineering Practice

3051SF Series Flowmeter Pressure Transmitters

See DSI 1000 Declaration of Conformity for 3051SF Series Flowmeter PED Information

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Document Rev: 2013_A

ROSEMOUNT

EC Declaration of Conformity

No: RMD 1044 Rev. V

ATEX Directive (94/9/EC)

Model 3051S Pressure Transmitters and 3051SF Flowmeter Transmitters

BAS01ATEX1303X – Intrinsic Safety Certificate
Equipment Group II, Category 1 G
Ex ia IIC T4 Ga
Harmonized Standards Used:
EN 60079-0:2012, EN 60079-11:2012

BAS01ATEX3304X – Type n Certificate
Equipment Group II, Category 3 G
Ex nA IIC T5 Gc
Harmonized Standards Used:
EN 60079-0:2012, EN 60079-15:2010

BAS01ATEX1374X – Dust Certificate
Equipment Group II, Category 1 D
Ex ta IIIC T105°C T_{500}95°C Da
Harmonized Standards Used:
EN 60079-0:2012, EN 60079-31:2009

BAS04ATEX0181X – Mining Certificate
Equipment Group I, Category M1
Ex ia I Ma
Harmonized Standards Used:
EN 60079-0:2012, EN 60079-11:2012

BAS04ATEX0193U – Mining Certificate: Component
Equipment Group I, Category M1
Ex ia I Ma
Harmonized Standards Used:
EN 60079-0:2012, EN 60079-11:2012

For 3051S transmitters, 300S housings, 3051SFx flowmeters without RTD option:

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EC Declaration of Conformity

No: RMD 1044 Rev. V

KEMA00ATEX2143X – Flameproof Certificate

Equipment Group II, Category 1/2 G
Ex d IIC T6…T4 Ga/Gb
Harmonized Standards:
EN 60079-0:2012, EN 60079-1:2007, EN 60079-26:2007

For 3051SFx flowmeters with RTD options:

KEMA00ATEX2143X – Flameproof Certificate

Equipment Group II, Category 1/2 G
Ex d IIC T5/T6 Ga/Gb
Harmonized Standards:
EN 60079-1:2007, EN 60079-26:2007
Other Standards Used:
EN 60079-0:2006
(A review against EN60079-0:2009, which is harmonized, shows no significant changes relevant to this equipment so EN60079-0:2006 continues to represent "State of the Art")

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EC Declaration of Conformity

No: RMD 1044 Rev. V

PED Notified Body

3051S Series Pressure Transmitters

Det Norske Veritas (DNV) [Notified Body Number: 0575]
Veritasveien 1, N-1322
Hovik, Norway

ATEX Notified Bodies for EC Type Examination Certificate

DEKRA Certification B.V. [Notified Body Number: 0344]
Utrechtseweg 310
Postbus 5185
6802 ED Arnhem
Netherlands

Baseefa [Notified Body Number: 1180]
Rockhead Business Park, Staden Lane
Buxton, Derbyshire SK17 9RZ
United Kingdom

ATEX Notified Body for Quality Assurance

Baseefa [Notified Body Number: 1180]
Rockhead Business Park, Staden Lane
Buxton, Derbyshire SK17 9RZ
United Kingdom

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00825-0100-4801

Quick Start Guide
00825-0100-4801, Rev MA
March 2015

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